

## Lesson: Probability using the words "and" & "or"

**and** – elements that have both features

**or** – elements that have either feature

	Blonde	Black	Brown	Red
Boys				
Girls				

1. **How many** students are girls?
2. **How many** students are girls AND have brown hair?
3. **How many** students are girls OR have brown hair?
4. **How many** are boys OR have blonde hair?

In a deck of 52 playing cards, **how many** are the type listed below?

5. a six OR a jack?
6. a queen AND a red?
7. a queen OR a red?
8. a nine AND a black?
9. a four AND a king?
10. a two OR a queen?
11. a club AND a 7?
12. a spade OR a 3

### HOMEWORK

A survey of student participation in school music programs had the results shown in the table.

1. **How many** students are girls?

$$49 + 57 = 106$$

2. **How many** students participated?

$$43 + 49 = 92$$

3. **How many** students are girls AND participated?

$$49$$

4. **How many** students are girls OR participated?

$$106 + 43 = 149$$

	Participated	Did not participate
Boys	43	59
Girls	49	57

List the integers from 1 to 10 (inclusive) that meet the following requirements.

5. even

2, 4, 6, 8, 10

6. multiples of 3

3, 6, 9

7. even AND multiples of 3

6

8. even OR multiples of 3

2, 3, 4, 6, 8, 9, 10

List the integers from 1 to 20 (inclusive) that are **multiples** of the following numbers:

9. 5

5, 10, 15, 20

10. 3

3, 6, 9, 12, 15, 18

11. 5 AND 3

15

12. 5 OR 3

3, 5, 6, 9, 10, 12, 15, 18

In a deck of 52 playing cards, **how many** are the type listed below?

13. a queen OR a heart?

4 + 13 - 1

16

14. a heart OR red

13 + 13 (diamonds)

26

15. a seven OR an eight

4 + 4

8

In a deck of 52 playing cards, what is the **probability** that you draw ...

16. a four OR queen

4 + 4

$\frac{8}{52}$

17. a red AND a five

$\frac{2}{52}$  2 red 5s

18. a black AND a jack

2

$\frac{2}{52}$

19. a six OR a red

4 + 26 - 2 red 6s

$\frac{28}{52}$

20. a two AND a diamond

$\frac{1}{52}$

21. a two OR a diamond.

4 + 13 - 1

$\frac{16}{52}$

22. a face card OR a black

12 + 26 - 6

black face

$\frac{32}{52}$

23. a 5 AND a king

$\frac{0}{52}$

24. a spade OR an even-numbered card

13 + 15

$\frac{28}{52}$

## REVIEW

You buy doughnuts for Ms. Wood's class. There are 8 plain, 4 glazed, 7 chocolate, and 10 sprinkled doughnuts.

25. What are the **odds** that I get my favorite kind—sprinkled? 10 : 19

26. If I choose a doughnut randomly, what is the **probability** of getting a glazed?  $\frac{4}{29}$

27. What is the **probability** of getting a sprinkled OR a glazed doughnut?

10 + 4 = 14

$\frac{14}{29}$